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(54) Title: PROCESS FOR MAKING HIGH-PERFORMANCE POLYETHYLENE MULTIFILAMENT YARN

(57) Abstract: The invention relates to a process for making high-performance polyethylene multi-filament yarn comprising the steps of a) making a solution of ultra-high molar mass polyethylene in a solvent; b) spinning of the solution through a spinplate containing at least 5 spinholes into an air-gap to form fluid filaments, while applying a draw ratio  $DR_{fluid}$ ; c) cooling the fluid filaments to form solvent-containing gel filaments; d) removing at least partly the solvent from the filaments; and e) drawing the filaments in at least one step before, during and/or after said solvent removing, while applying a draw ratio  $DR_{solid}$  of at least 4, wherein in step b) each spinhole comprises a contraction zone of specific dimension and a downstream zone of diameter  $D_n$  and length  $D_n$  with  $L_n/D_n$  of from 0 to at most 25, to result in a draw ratio  $DR_{fluid} = DR_{sp} * DR_{ag}$  of at least 150, wherein  $DR_{sp}$  is the draw ratio in the spinholes and  $DR_{ag}$  is the draw ratio in the air-gap, with  $DR_{sp}$  being greater than 1 and  $DR_{ag}$  at least 1. The invention further relates to a high-performance polyethylene multifilament yarn, and to semi-finished or end-use products containing said yarn, especially to ropes and ballistic-resistant composites.